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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,214	10/15/2003	Ivan Osorio	011738.00137	7258

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EXAMINER	
MANUEL, GEORGE C	

ART UNIT	PAPER NUMBER
3762	

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/688,214	OSORIO ET AL.	
	Examiner	Art Unit	
	George Manuel	3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-14 and 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Badura et al '234.

Badura et al disclose an ion beam therapy system with redundancy means for ensuring treatment therapy is turned off. The beam guidance is checked by using redundancy means for a redundant termination of extraction and their functionality is checked and checking of the ability of beam guidance dipoles in the beam guidance to connect and disconnect is carried out, wherein after an unsuccessful termination request and establishment of an ion beam, a renewed termination request is requested via a separate redundant channel and for independence from a control of an acceleration device, a special cable connection to a last dipole of the beam guidance upstream from a treatment site

is provided to a power supply unit, so that a connection of this dipole can be effected only from a therapy supervisory control room via a special signal, wherein a check of connections and terminals of the therapy supervisory control room to the last dipole of the beam guidance and to the redundant channel for an additional termination of extraction is carried out prior to each block of irradiation procedures.

One of ordinary skill in the art would have found it obvious to use a timer for timing the interval between the first termination request and the second redundant request because ion beam therapy may comprise residual particle counts. Badura et al suggests that high particle counts should trigger an alarm for switching off the beam and that particle count may vary. See col. 11, lines 31-59.

Regarding claim 4, the examiner is interpreting the disclosed medical electron accelerator disclosed in Badura et al to comprise electrical stimulation treatment therapy.

Regarding claims 5, 6, 9, 12 and 19-22, Badura et al teach loading computer programs and data sets into the control computer of the ion beam therapy system and checking for accurate loading in order to be able to correctly load data required for the irradiation of a patient into the sequence control of the system. Irradiation may commence for only correctly loaded data. Special programs in the server computers allow the supervisory control system to check that programs and data are written into the individual processors of the control

computer and read back and compared with the programs and data stored in the individual memories. One of ordinary skill in the art would have found it obvious to modify the computer executable instruction to further time the interval between termination requests as discussed above for the reasons set forth above because Baura et al teach the readiness for operation of all computer programs and a possible emergency shutdown or release of an irradiation procedure by the medical operating console of the therapy system may be computer controlled.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Strul et al '681.

Strul et al disclose software controlled limits for temperature, power, and impedance (that turn off power if exceeded), there are also redundant hardware controls, including comparators 90, 96, that turn off power if the maximum temperature or power is exceeded. One of ordinary skill in the art would have found it obvious to provide a timer for initiating the redundant hardware controls because temperature, power, and impedance have residual energy capacities that diminish with time to allow for a more accurate determination of whether they have been exceeded.

Response to Arguments

Applicant's arguments filed 6/9/06 have been fully considered but they are not persuasive. A termination request is an OFF command. Further, turning off treatment therapy is an appropriate intervention for an expired cycle time of 10 ms. Applicant's assertion that there would be no need for a timer in the Badura

system, is without merit in view of the teaching in Badura that, "manual emergency shutdown must be guaranteed at all times." Also, Badura teaches measuring a total time comprising a reaction time for a request and a reaction time for beam termination. A supervisory control system generates an appropriate signal for indicating an emergency shutdown is needed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Spako et al (US 5,103,395) disclose timers 124 and 126 and an emergency shut-off relay R1 for providing patient protection during medical therapy comprising radiation exposure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Manuel whose telephone number is (571) 272-4952.

George Manuel
Primary Examiner
Art Unit: 3762